Government Support on Industrial Cluster Development: Some Lessons

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Abstrak

Di pasar global, kompetisi antar negara cenderung berupa kompetisi antar klaster industri daripada antar perusahaan. Negara maju dan negara sedang berkembang berupaya terus untuk menciptakan klaster industri yang mampu berkompetisi global dan yang berkelanjutan yang mampu menarik investasi dan mengembangkan perekonomian daerah. Pemahaman tentang praktik terbaik dari klaster yang berhasil akan sangat berharga. Artikel ini memaparkan beberapa temuan dan pelajaran dari suatu studi eksploratif yang mempelajari pengembangan klaster industri di Australia. Program pemerintah Australia pada penembangan klaster dipaparkan, dan beberapa pelajaran yang mencakup kebijakan pendekatan klaster, penunjukkan manajer klaster, keberlangsungan klaster, acara networking, dan penggunaan teknologi informasi dan komunikasi dibahas.

Kata kunci: klaster, industri, pembangunan daerah, kebijakan, IKM

Abstract

In the global market, competition among countries is likely between industrial cluster rather than individual firms. Developed and less developed countries strive to create global competitive and sustainable cluster which can attract investment and develop regional economy. Understanding best practices from the successful cluster development is valuable. This paper presents some lessons from an exploratory study investigating the industrial cluser development in Australia. The Australian government programs on cluster development is presented, and some lessons covering the cluster-approach policy, cluster manager appointment, cluster sustainability, networking events, and use of ICT are discussed.

Keywords: cluster, industry, regional development, policy, SME

1. Introduction

Cluster approach has been popular as a tool for regional economic development in many countries especially since the term was popularized by Michael Porter in his book "The competitive advantage of nations" launched in 1990. A number of best practices about cluster development project have been documented in project report and academic literature. Though academics and practitioners agree that there is no single successful cluster approach for any situation, the lessons from successful clusters are desirable by policy makers and cluster practitioners. This paper presents a study of investigating Australian industrial clusters, with focus on the government roles to facilitate cluster development. The government support is critical for strengthening the existing 'weak' industrial clusters especially in developing countries, such as Indonesia.

2. Literature Review

The word 'cluster' has a generic rather than specific meaning. In this context, the common terms used for example are industrial cluster, business cluster, and regional cluster. The concept of industrial cluster is very widely used and there is no single correct definition. Some articles present the definition of cluster and SMEs and the associated terms such as an industrial agglomeration and a network (Brookfield 2007; Lee, 2006; Karaev et al. 2007; Novelli 2006; Rocha and Sternberg 2005). Rocha and Stenberg (2005) defined a cluster as having three dimensions: geographical proximity, an inter-firm network, and an inter-organisational or institutional network. vom Hofve and Chen (2006) distinguish three different concepts of industrial cluster which are following: (1) the theoretical principles of localization economies based on Marshall; (2) the concept of industrial complex from Isaard, and (3) the generic cluster concept from Porter. A cluster is not just an industrial agglomeration (Rocha and Sternberg, 2005) with its geographical proximity characteristics, but also an organized proximity: cognitive, organizational, social, institutional (Bocquet and Mothe, 2010). The importance of the interaction and relationship, not just for trade-based interaction, is also stated in some articles (e.g. Doloreux 2004, Rocha and Sternberg 2005, Davies, 2001; Lee, 2006). Gordon and McCann (2000) suggested three main cluster models for analysing a cluster: agglomeration economies model for capturing the external economies of geographical concentration, industrial complex model for capturing the inter-firm business linkages, and social-network model for capturing relationships. In reality, however a cluster could not be explained by only single model of them as two or three models could come together (Martin and Sunley, 2003). Despite of various definitions, cluster concept shares a common characteristic as a group of companies and institutions co-located in a specific geographic region and linked by interdependencies in providing a related group of products and/or services (Ketels, 2003). Similarly, a cluster refers to a group of firms, businesses, and institutions that co-locate geographically in a specific region and that enjoy economic advantages through this co-location in which informational, transactional, incentive, and other efficiencies occur (vom Hofve and Chen 2006; Porter, 1998, 2000).

As the cluster concept is related to geographical economic area, many local, regional, and national governments have made cluster policies and initiatives to raise competitiveness of industries in their areas. Cluster approach has become a macroeconomic tool for regional economic development. Prior studies support about the importance of government role or policy to promote cluster (e.g. Karaev et al, 2007; Lee 2006; Davies, 2001). As a part of regional economic development, cluster performance could be associated with the economic indicators such as the firm growth in industrial sectors (Beaudry and Swann, 2009), and the growth of entrepreneurships (Rocha and Sternberg, 2005), and more job creation (Wennberg and Lindqvist, 2010). There are many best-practices about cluster initiatives throughout the world could be learnt, such as The Cluster Initiative Greenbook (Solvell et al, 2003). Cluster initiative programs sponsored by governments are targeted mostly to the naturally-grown clusters which are already strong or still embryonic. There is a kind of consensus in literature that government policies on cluster are unlikely to succeed in creating a new cluster rather than the one which is already present (Schmitz and Nadvi, 1999). Though it is sensible, a practical question emerges "what governments should do if there is lack of embryonic clusters?" (Martin and Sunley, 2003). This could be a reason why the formation of new clusters through a cluster initiative program is still occurring.

It is difficult sometime to determine whether a real geographically cluster can be called as a cluster conceptually because of lack of interaction among members. The lack of integration and cooperation among cluster members are common phenomenon in practice, as indicated by

some cases in various countries such as Brazil (Oprime et al, 2011), Indonesia (Tambunan, 2009), and South Africa (Davies, 2001). Those clusters might be still called a cluster, but not an effective cluster, as an effective cluster should include social interaction, trust, and a shared vision (Lee, 2006).

3. Methods

The study presented in this paper is qualitative and exploratory, and it is a part of the bigger research project aimed to investigate industrial clusters in Victoria - Australia. This paper concentrates on the issue of government role to support the development of regional industrial clusters. Primary data is collected through face-to-face interview with key person in two government bodies called Regional Development Victoria and Multimedia Victoria, and some cluster managers. The information about cluster programs presented in this paper was specifically collected from the website of Regional Development Victoria (www.rdv.vic.gov.au) and Multimedia Victoria (www.mmv.vic.gov.au). In addition, some materials are provided by interviewees. The study took place on the first half of 2011.

4. Findings

This study applies a loose definition of an industry cluster, because a 'cluster' supported by the government's cluster program can take various forms such as cluster and association. The definition used is "a cluster, network, association or business group of a specified industry sector in a particular geographical area which pursues interaction, cooperation or collaboration among its members to create value; it is open to any parties within its industry sector and encompasses vertical and horizontal linkages including government bodies, universities and research institutes".

The state of Victoria supports cluster development through two governmental bodies: the Regional Development Victoria (RDV) with its Innovation through Clusters, and the Multimedia Victoria (MMV) with its ICT Linkages Program. Both programs have two categories of funding which are for supporting the establishment of new cluster and the development of existing cluster.

Cluster program from Regional Development Victoria

The Innovation tthrough Clusters Program is designed for the period 2009-2012 and implemented by the Department of Business and Innovation. The former name of the program was Regional Innovation Cluster Program, from which some clusters studied were funded. Its objective is to support the growth and development of sustainable, new and existing regional clusters to strengthen innovation, productivity and competitive advantage in rural and regional Victoria. Clusters will be underpinned by strong partnerships based approaches between regional businesses and research and education institutions. The target group is regional businesses plus their respective supply chains and other linkages within a geographical area. Industry associations, higher education and research institutions are expected to be represented in the planned cluster initiative. Funding may occur through a local government authority, university, industry association, lead company within a cluster or an incorporated cluster. The grants could be used for the following activities:

- assists existing regional clusters to streamline their activities and, where feasible, develop spin-off entities
- maps new supply chains and networks
- identifies new clusters (with an emphasis on those with the potential to develop research and development/ higher education links leading to innovation)
- creates a range of new competitive business entities in regional Victoria with an emphasis on export and import replacement
- produces investment attraction and both direct and indirect flow-on of jobs.

The project is available for funding a new cluster as well as an existing cluster. Activities that would generally be funded for a new cluster include:

- engagement of a cluster coordinator / facilitator;
- conduct a mapping/capability audit;
- development of feasibility study/ economic impact study;
- development of cluster governance arrangements;
- development of a cluster vision and strategic plan;
- development of a cluster communications strategy;
- delivery of seminars/workshops to cluster stakeholders;
- identification of priority projects

Furthermore, activities that would generally be funded for an existing cluster include:

- updated review of cluster status and strategic plan;
- review of governance arrangements;
- review of current and potential priority projects undertaken by the cluster;
- review of ongoing financial sustainability;
- review of any spin-off entities/potential entities developed by the cluster (commercial outcomes);
- potential to link likeminded clusters (domestically and internationally);
- case study successful cluster initiatives that include the private sector, higher education and research and development institutions;
- ongoing involvement of cluster coordinator / facilitator.

The application is expected to provide the following information:

- Industry ownership and support: The cluster must be owned and driven by the participating businesses and industries.
- Collaboration: The cluster must demonstrate the range and nature of the collaborative activities that are currently being, or will be undertaken amongst the cluster participants.
- Role of universities and research institutions in innovation: This should include partnerships (or their potential) with preferred regional, Victorian Universities, TAFEs (Technical and Further Education) and other research and educational institutions.
- Innovation: Innovation through for example, product development, process improvement or workplace management must be demonstrated. It is important that there is an emphasis on technology development or diffusion and where appropriate, the development of new skills required to support such developments.
- Regional strengths and targeted industry support: The cluster should be based on an emerging or current regional competitive strength or comparative advantage. Such strengths and advantages typically reflect geographical concentrations of firms and employment in particular industries. It is important that this advantage is sustainable.

- Council / Regional support: The clusters should be support by the relevant individual local governments or groupings of local government.
- Export focus: The cluster should be export orientated or have the potential to become so.
- Geographic focus: focus of the cluster should be directed to one or more of the 48 local government areas in regional and rural Victoria.

Cluster program from Multimedia Victoria

Multimedia Victoria focuses on facilitating the development of ICT-based cluster. The ICT Linkages Program aims to support the establishment and growth of ICT clusters and networks. This will develop the local ICT industry and generate ongoing benefits for the Victorian economy. The ICT Linkages Program is an initiative of the Victorian Government ICT Industry Plan 2005 - 2010.

The ICT Linkages Program aims to:

- Support the establishment of new clusters and networks by targeting emerging opportunities in ICT where Victoria can develop a competitive advantage
- Assist existing collaborative organizations to move to the next stage of development in order to develop the local ICT industry and to generate benefits for individual companies and the Victorian economy
- Encourage greater collaboration between the ICT industry, other industry sectors, education, and research institutions
- Stimulate greater innovation in the development and delivery of products and services
- Stimulate new business, investment, employment and export opportunities

Under the ICT Linkages Program, groups of organisations will be able to bid for funding to support activities that will develop ICT clusters and networks. Two streams of funding are available. Stream 1 supports the establishment of new and emerging clusters and networks in strategic areas, while stream 2 supports the development and growth of existing collaborative organisations. Successful applicants will have to enter into a grant agreement, for a minimum of 1 year and a maximum of 2 years, with the Victorian Government.

The purpose of Stream 1 is to provide seed funding to support the establishment of new and emerging clusters and networks. Up to 50% of the costs of establishing a new cluster will be granted to a maximum of $100,000 per cluster over a maximum of two years. Successful applicants will need to match this funding to an equivalent value through a mixture of cash and in-kind contributions. Funding may be used for activities including:

- provision of secretariat/administration support (funding will be provided up to 25% of the total costs to provide this support);
- preparation of a feasibility study;
- undertaking business planning;
- undertaking market research;
- attendance and staging of conferences/seminars/networking events;
- attendance at trade shows; and/or
- development of marketing materials including websites.

The purpose of Stream 2 is to give targeted assistance to develop and implement strategies to assist existing collaborative organisations to move to the next stage of development. Up to $20,000 will be provided for each activity undertaken by a collaborative organisation up to a

maximum of $80,000 over a maximum of two years. Successful applicants will be required to match this funding on a dollar-for-dollar basis with financial contributions from members.

Funding may be used for activities including, but not limited to (1) undertaking a member capability audit and identifying strategies to fill capability gaps with a particular focus on strengthening link with the education sector and research institutions; (2) undertaking a skills audit and identifying initiatives to develop skills (with an emphasis on establishing linkages with the education sector); and/or developing an research and development strategy including the identification of joint research projects, current research capabilities, potential linkages with public and private research institutions, possible sources of funding and the development of business cases.

Clusters funded

This study has investigated six industrial clusters who have received seed funding from Regional Development Victoria (RDV) or Multimedia Victoria (MMV). Ballarat ICT, Geelong Food Co-Product and Northern Poultry Cluster are clusters supported by RDV. On the other side, eLearning, ICT Geelong and GreenIT are funded by MMV. The interviews revealed that government funding is mostly for initiating the cluster which could last in 2 – 3 years. Most of clusters have a form as a company limited by guarantee. Through this form, cluster organizations could generate income for their sustainability. With a company status, the organizations are expected to find the ways for sustainability. Those cluster organizations try to find a revenue model for its sustainability. The conventional revenue model implemented (or planned to be implemented) by those organizations are membership fees, event sponsorship, and promotion. Though in a corporation status, local city government still may contribute. The possible reason is that the organization has a regional economic development role, whether for investment or new job creation

The interviews indicate that the driver of cluster establishment is formally the government determination to support the existing or potentially clusters of certain industry sector such as in Ballarat ICT cluster, GreenIT cluster and eLearning industry association. This finding supports the idea of Porter's cluster initiatives which sees cluster approach as a regional economic development tool. Though there is a formal establishment, the clusters were not created from nothing as the base already exists. The base is the existing firms and the government determination to support cluster initiatives. University has also played a significant role in the cluster development. The high involvement is observed from the University of Ballarat involvement in the preliminary study for initiating the Ballarat ICT establishment and then the current operation, through its research team and the University Technology Park. Similarly, a less strong role is observed from the Royal Melbourne Institute of Technology (RMIT) involvement in preliminary study for GreenIT establishment. The findings support the concept of triple helix of university-industry-government relations, which is essential for the regional economic development.

The important role of government is not only providing financial supports, but also the right policy to support the local present firms and attract new investment. The development of ICT clusters is attributed by the State Government decision to outsource IT service and the companies that provide the service should be located locally or have local business partners. This kind of policy seems working well to stimulate the growth of ICT industry. However, this opportunity is not easily seized by 'individual' SMEs. Therefore, the interview stated that

the collaboration between a group of SMEs and larger enterprises is becoming essential to get significant amount of the government buying.

5. Lessons Learned

This study provides some lessons which could be considered for cluster development policy in the Indonesian context. Six key areas are highlighted. First, the cluster approach as a regional economic policy is still relevant and even more relevant in the current global competition. While the cluster approach is no longer new, the logic that it is still better for government to support cluster of firms rather than individual firms as stated in the literature is still correct. This study shows that the cluster approach is still appropriate for both traditional industry as well as ICT-based industry. This further suggests the appropriateness for the cluster approach in the current economic development both for traditional and digital industries.

Second, a kind of policy to provide business opportunity for regional businesses is still required to support the cluster growth. One example obtained from this study is the government purchases, which requires the suppliers to be present locally or have local business partners.

Third, a cluster is managed by a professional manager who is contracted for managing cluster activities. The study reveals that the most of cluster managers are not contracted for a full-time job. They have their own job such as being a consultant or managing own business. This study also found that one cluster manager is only contracted for one and half day per week. Through this kind of arrangement, there is no need for establishing a dedicated office of cluster organizations.

Fourth, the government funding should be considered as seed funding and it has limited period. Clusters are urged to develop a revenue business model for its sustainability. This study reveals that a cluster organization make its formation as a legal organization in the form of a limited company by guarantee. Through this formation a cluster organization becomes a legal entity that can generate/ acquire funding from the outside sources.

Fifth, a networking event is a common program run by clusters including Australian clusters and Indonesian clusters as well. The lesson to note is that some Australian clusters indicate effective networking events which are directed to pursue real business collaboration such as to win a bigger tender and to establish a new collaborative venture by sharing the individual company resources. It means that networking events should not be seen as a goal of cluster program but as a means for real business collaboration. Setting networking events for collaboration is not an easy task. One of successful approach is to build a small group of firms which are not competing to each other and build a strong trust (social capital) among the members.

Sixth, it is surprising that only a small number of cluster studied use ICT to support interaction, communication, and collaboration among cluster members. Those using it have a strong direction or strategy and also a strong leadership of cluster manager or key person for adopting ICT and believing that ICT can deliver values. The new emerging ICT applications based on web 2.0 for social networking, document sharing, collaborative work, and member management provide potential capabilities to support activities.

6. Conclusion

As developing a successful cluster is not an easy task as indicated by many cluster initiatives failed, learning from successful cases has been pursued. This paper has presented some findings and lessons from the Australia case in facilitating industrial clusters for regional economic development. The lessons could be considered by the Department of Industry and local governments as well as cluster managers in Indonesia to find the appropriate and innovative ways to support local industrial clusters. Above all, good governance in executing government policy and program, as well as good governance in managing cluster organizations are absolutely critical.

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